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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/917,578	07/28/2001	Arnold E. Goldman	GCD 98-55-US	1058

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EXAMINER	
HINDI, OMAR Z	
ART UNIT	PAPER NUMBER
2873	

DATE MAILED: 09/25/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/917,578	GOLDMAN ET AL.	
	Examiner	Art Unit	
	Omar Z. Hindi	2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *Amendment A* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 July 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4&6* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☒ Other: *Detailed Action* .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujihara et al (5065011) in view of Takahashi (5621835).

Fujihara discloses as in claim 1, a vehicle for enabling attachment of an optic fiber (fig.2) to a multi-integrated optic chip (fig.2; 30,31,32 combined) in optical communication therewith, and for maintaining alignment of the fiber at its end adjacent the chip (fig.2; 37 and 37a) a sleeve (fig.2; 34) having a symmetrically-shaped cavity (fig.2; element 35) bounded by termini (fig.2 surface 35a and the adjacent surface of the same figure) which respectively interface with the chip and the fiber. Fujihara does not disclose the use of adhesive disposed within the cavity and symmetrically bonding the fiber to the chip. Within the same field of invention, Takahashi discloses the use of adhesive disposed within the cavity (fig.4 and 6; 19) and symmetrically bonding the fiber (fig.6; 8) to the chip (fig.6; 9'). It would have been obvious for one skilled in the art at the time the invention was made to bond the optical fiber with the chip using adhesive for the purpose of preserve the bonding of chip and the fiber and protection from the gravitational and wicking effects.

2. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujihara et al (5065011) in view of Takahashi (5621835).

Fujihara discloses as in claim 2, a vehicle for enabling attachment of an optic fiber (fig.2) to a multi-integrated optic chip (fig.2; 30,31,32 combined) in optical communication therewith, and for maintaining alignment of the fiber at its end adjacent the chip (fig.2; 37 and 37a), comprising; a sleeve (fig.2; 34) which has a symmetrically-shaped cavity (fig.2 surface 35) bounded by termini (fig.2 surface 35a and the adjacent surface of the same figure) that respectively interface with the chip and the fiber and in which cavity has an axis and is internally bounded by a wall (fig.2; 35a) which is substantially centered on the axis (fig.2) and which extends from chip-interfacing terminus to fiber-interfacing terminus, termini are centered on the axis (fig.2), and a line, lying within any plane intersecting the axis at right angles thereto and terminating in cavity wall, is bisected into two equal segments (this is applicable to figure 2; elements 30,31,32 combined). Fujihara does not disclose the use of adhesive disposed within the cavity and symmetrically bonding the fiber to the chip. Within the same field of invention, Takahashi discloses the use of adhesive disposed within the cavity (fig.4 and 6; 19) and symmetrically bonding the fiber (fig.6; 8) to the chip (fig.6; 9'). It would have been obvious for one skilled in the art at the time the invention was made to bond the optical fiber with the chip using adhesive for the purpose of preserve the bonding of chip and the fiber and protection from the gravitational and wicking effects.

Claims 3-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujihara et al (5065011) in view of Takahashi (5621835).

Fujihara discloses as in claim 3, a vehicle for enabling attachment of an optic fiber (fig.2) to a multi-integrated optic chip (fig.2; 30,31,32 combined) in optical communication therewith, and for maintaining alignment of the fiber at its end adjacent the chip (fig.2; 37 and 37a) a sleeve (fig.2; 34) having a symmetrically-shaped cavity (fig.2; element 35) bounded by termini (fig.2 surface 35a and the adjacent surface of the same figure) which respectively interface with the chip and the fiber which is configured to fit onto the chip and is disposed to accept the fiber (fig.2). Fujihara does not disclose the use of adhesive disposed within the cavity and symmetrically bonding the fiber to the chip the fiber configured to fit onto the chip. Within the same field of invention, Takahashi discloses the use of adhesive disposed within the cavity (fig.4 and 6; 19) and symmetrically bonding the fiber (fig.6; 8) to the chip (fig.6; 9'). It would have been obvious for one skilled in the art at the time the invention was made to bond the optical fiber with the chip using adhesive for the purpose of preserve the bonding of chip and the fiber and protection from the gravitational and wicking effects.

Fujihara discloses as in claim 4, a cavity has an axis and is internally bounded by a wall (fig.2; 35a) which is substantially centered on the axis (fig.2) and which extends from chip-fitting terminus to fiber-accepting terminus, termini are centered on the axis (fig.2), and a line, lying within any plane intersecting the axis at right angles thereto and terminating in cavity wall, is bisected into two equal segments (this is applicable to figure 2; elements 30,31,32 combined).

Fujihara discloses as in claim 5, cavity wall slopes from chip-fitting terminus to fiber-accepting terminus, (fig.2).

Claim 6 is rejected under 35 U.S.C. 103(a) as applied to claim 4, in view of Takahashi (5621835), as being well known in the art.

Takahashi discloses as in claim 6 the purpose of using adhesive material in the symmetrical cavity, but it would be obvious to one skilled in the art to use adhesive material for the purpose of preserve the bonding of chip and the fiber and protection from the gravitational and wicking effects, as a common knowledge in the art.

Fujihara discloses as in claim 7, cavity wall is shaped a truncated right circular cone, (fig.3).

Fujihara discloses as in claim 8, cavity wall is shaped a truncated right circular pyramid, (fig.3).

Claim 9 is rejected under 35 U.S.C. 103(a) as applied to claim 4, in view of Takahashi (5621835), as being well known in the art.

Takahashi discloses as in claim 9 the use of a sleeve, but it would be obvious to one skilled in the art to use a temporarily sleeve for the purpose of injecting the adhesive material into the cavity and removing it after curing, as a common knowledge in the art.

Takahashi discloses as in claim 10, sleeve (fig.6; 4) is permanently attached to adhesive (19) and the chip (9'). Figure 6 shows the final product where it indicates that the sleeve is permanently attached to the adhesive and the chip.

Claims 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujihara et al (5065011) in view of Takahashi (5621835).

A method for attaching an optic fiber to an optic chip (fig.2; 30,31,32 combined) and for maintaining alignment of the fiber at its end adjacent the chip, comprising the steps of positioning a sleeve (fig2; 34) having a symmetrically shaped cavity on the chip (fig.2; element 35). Fujihara does not disclose placing an adhesive into the sleeve cavity; inserting the fiber into the cavity; securing the fiber to the chip; and curing the adhesive. Within the same field of invention, Takahashi discloses placing an adhesive into the sleeve cavity (fig.4 and 6; 19); inserting the fiber into the cavity; securing the fiber to the chip (fig.6; 8 and 9') and curing the adhesive (col.2 lines 8-10). It would have been obvious for one skilled in the art at the time the invention was made use the method of bonding the optical fiber with the chip using adhesive for the purpose of preserve the bonding of chip and the fiber and protection from the gravitational and wicking effects.

Takahashi disclose as in claim 12, a method further comprising the step of aligning the fiber (fig.6; 8) within the cavity (19) and positioning the fiber end adjacent to the chip (fig.6; 8 near 9').

Claim 9 is rejected under 35 U.S.C. 103(a) as applied to claim 4, in view of Takahashi (5621835), as being well known in the art.

Takahashi discloses as in claim 13 the use of a sleeve, but it would be obvious to one skilled in the art to use a temporarily sleeve for the purpose of injecting the

adhesive material into the cavity and removing it after curing, as a common knowledge in the art.

Takahashi discloses as in claim 14, a method of leaving the sleeve (fig.6; 4) is securely attached to adhesive (19) and the chip (9') after adhesive has cured (col.2 lines 8-10). Figure 6 shows the final product where it indicates that the sleeve is permanently attached to the adhesive and the chip.

Fujihara discloses as in claim 15, a method further comprising the step of providing the sleeve cavity with a truncated pyramid configuration (fig.2 and 3).

Fujihara discloses as in claim 16, a method further comprising the step of providing the sleeve cavity with a truncated right circular cone configuration (fig.2 and 3).

Claims 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujihara et al (5065011) in view of Takahashi (5621835).

Fujihara discloses as in claim 17, a method for attaching an optic fiber (fig.2) to an optic chip (fig.2; 30,31,32 combined) for maintaining alignment of the fiber at its end adjacent the chip (fig.2; 37 and 37a), comprising the steps of utilizing a sleeve (fig.2; 34) having a symmetrically shaped cavity (fig.2; element 35). Fujihara does not disclose placing an adhesive into the sleeve cavity; positioning the sleeve onto the chip; inserting the fiber into the cavity aligning the fiber within the cavity and positioning the fiber end adjacent the chip; securing the fiber to the chip; and curing the adhesive. Within the same field of invention, Takahashi discloses placing an adhesive into the sleeve cavity (fig.4 and 6; 19); positioning the sleeve onto the chip (fig.6; 8 onto 9'); inserting the fiber into the cavity (fig.6; 8 into 19) aligning the fiber within the cavity and positioning the fiber end adjacent the chip;

securing the fiber to the chip (fig.6); and curing the adhesive (col.2 lines 8-10). It would have been obvious for one skilled in the art at the time the invention was made use the method of bonding the optical fiber with the chip using adhesive for the purpose of preserve the bonding of chip and the fiber and protection from the gravitational and wicking effects.

Takahashi discloses as in claim 18 the use of a sleeve, but it would be obvious to one skilled in the art to use a temporarily sleeve for the purpose of injecting the adhesive material into the cavity and removing it after curing, as a common knowledge in the art.

Takahashi discloses as in claim 19, a method of leaving the sleeve (fig.6; 4) is securely attached to adhesive (19) and the chip (9') after adhesive has cured (col.2 lines 8-10). Figure 6 shows the final product where it indicates that the sleeve is permanently attached to the adhesive and the chip.

Fujihara discloses as in claim 20, a method further comprising the step of providing the sleeve cavity with a truncated pyramid configuration (fig.2 and 3).

Fujihara discloses as in claim 21, a method further comprising the step of providing the sleeve cavity with a truncated right circular cone configuration (fig.2 and 3).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following reference is cited for having limitation such as pigtail assembly Anderson (4969702).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Omar Z. Hindi whose telephone number is (703) 305-6845. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached on (703) 308-4883. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

Omar Z. Hindi
Examiner
Art Unit 2873

OH
September 17, 2002

Georgia Epps
Supervisory Patent Examiner
Technology Center 2800